DAV PUBLIC SCHOOL, BAZPUR

SUMMER HOLIDAY ASSIGNMENT 2021-22

CLASS- XII SCIENCE

ENGLISH :

1. Read the chapters and the poems of Flamingo and Vistas and find out the underlying values in each chapter and poem. (Holiday Homework notebook) 20

2. Watch any movie based on the theme of Inspirational work during the difficult situation of your choice and give your comment as a critic. (Holiday Homework notebook) 20

3. Conduct an interview of the school children and note down their views in a P.P.T. regarding the changes(mentally, emotionally, physically, culturally, socially or any other) caused due to LOCKDOWN and curfew imposed by the authorities. 20

4. Create ANY 1 painting or sketch of your choice which illustrates the concept of any one of the Chapters or poems covered in the ENGLISH curriculum. **Paintings can be colourful, pencil shade or of any colour medium. 20**

5. Prepare a P.P.T. on the effects of Second Wave of Corona Pandemic and cover the activities/steps/consequences which were held/ which will be held in your country/region/state regarding CORONA PANDEMIC and also add your SUGGESTION as literary creation. 20

CHEMISTRY :

1. **Make investigatory PPT or project report on one of the given topics for your final practical. [30 marks]**
   i. Fermentation

Fuel Go Boom

Get More Hydrogen from Your Water

Hydrofoam: Changing the Way the World is Powered

Investigation Of Foaming Capacity Of Different Washing Soap

Measuring Solubility

Measuring the Amount of Acetic Acid In Vinegar

Mohr's salt

Percentage Purity Of Iron Wire

Pesticides in Fruits and Vegetables

Preparation Of Cuprammonium Rayon Threads

Preparation of Ink

Acidity In Tea

Analysis Of Honey

Analysis Of Vegetables And Fruit Juices

Comparing Lactose Percentage between Whole Milk and Powdered Milk

Comparison of the Citric Acid Concentration

Content of Cold Drinks Available in the Market

Determination Of Caffeine In Tea Samples

Determination of Contents of Tooth Powder

Determine the Quantity of Casein in Milk

Discoveries In The Field Of Chemistry

Dyeing of Wool, Silk and Cotton in Malachite Green

Effect Of Sodium Carbonate On Foaming Capacity Of A Soap

Effects of Dye on Different Types of Fabric

Effects of Heat on Vitamin C in Tomatoes

Electrical Cleavage of Mineral Ore

Electrolyte Turns On the Solar Cell

Evaluation of Drinking Water from Various Sources

Extraction of Nicotine Sulphate from Samples of Cigarettes

Preparation Of Soyabean Milk

Study of Content of Ascorbic Acid in Citrus fruits

To Check The Ions Present In The Toothpaste And Determine The Quality

To Compare The Rate Of Fermentation Of Given Samples Of Wheat Flour

To Prepare a Smoke Bomb

To Study the Digestion of Starch by Salivary Amylase

To Study the Effect of Metal Coupling on the Rate of Corrosions

To Study the Presence of Insecticides and Pesticides in Various Fruits and Vegetables

To Study the Presence of Oxalate Ion In Guava Fruit

Variation of Conductance with Temperature in Electrolytes

Which Grease Is Good for You?

Which of the Plant Material Used Would Make the Best Red Color on Fabric.

2. Write Functional group reagents that I'll send you in the whatsapp group in your experiment file. [30 marks]

3. Solve NCERT Intent and exercise questions of chapters 1-2 in holiday homework notebook and learn. [20 marks]

4. Complete and understand the following topics from different chapters in holiday homework notebook. [20 marks]

I. **Biomolecules - Structural determination of Glucose, Glycosidic linkage, Peptide linkage, Disaccharides and polysaccharides,Chemical structure of Nucleic acids DNA and RNA**

II. **Polymers - Classification of polymers, Mechanism of addition Polymerisation, Monomeric units of following polymers (Nylon-6,6, Nylon 6, Nylon 2,6, Decron, Bakelite, etc)**

III. **Chemistry in every day life - broad classification of Drugs, Soap and detergents, Type of soap and detergent , Artificial sweeteners, Preservatives, Antiseptics and disinfectants, Bacteriocidal and static medicine, Antihistamine and antidepressant.**

IV. **Learn p-block, d-block and F-block elements from periodic table.**

PHYSICS :

1-COMPLETE YOUR PRACTICAL WORK IN SECTION A WRITE FIRST 6 EXPERIMENTS AND IN SECTION B WRITE FIRST 6 EXPERIMENTS.

2:- Write any five activities from physics lab manual.

3:-Make any investigatory project from any topic from your Physics Ncert book and also write project report in Project file in good manners.

4- Prepare these topics and write in homework notebook separately day by day

A: GAUSS Law applications ,Equipotential surfaces ,concept of Capacitors

B: Solve all ncert examples from chapter 1 and 2

C: dipole and electric field due to dipole in both conditions

D: Potential energy concept due to two charges

MATHEMATICS :

1. Solve what is the principal value of $\left(\tan tan\ \frac{2\pi}{3}\right)$

2. Write the principal value of $\left(\tan tan\ \frac{7\pi}{6}\right)$

3. Evaluate: $\left[2\cos cos\left(2\frac{1}{2}\right)\right]$

4. Solve: $2(cos\ x) = (2\ cosec\ x)$ **,** $x \neq 0$**.**

5. Write the number of all possible matrices of order 2×3 **with each entry 1 or 2.**

6. If A and B are symmetric matrices, such that AB and BA are both defined, then prove that $AB - BA$ **are both defined, then prove that** $AB - BA$ **is askew-symmetric matrix.**

7. Show that all the diagonal elements of a skew symmetric matrix are zero.

8. A trust caring for handicapped children gets Rs 30,000 every month from its donors. The trust spends half of the funds received for medical and educational care of the children and for that it charges 2% of the spent amount from them, and deposits the balance amount in a private bank to get the money multiplied so that in future the trust goes on functioning regularly. What percent of interest should the trust get from the bank to get a total of Rs 1,800 every month? Use matrix method, to find the rate of interest. Do you think people should donate to such trusts?

9. If A and B are square matrices of order 3 such that $|A| = -1, |B| = 3$**, then find the value of** $|2AB|$**.**

10. **For what values of k, the system of linear equations** $x + y + z = 2, 2x + y - z = 3,$ $3x + 2y + kz = 4$ **has a unique solution?**

11. Using matrix method, solve the following system of equations:

$3x - 2y + 3z = 8\ ,\ 2x + y - z = 1, 4x - 3y + 2z = 4$

12. Using matrices, solve the following system of linear equations

$x + 2y + z = 7; x + 3z = 11; 2x - 3y = 1$

13. Make any working of Maths from class XII.

BIOLOGY :

1:-Write two questions and answer daily chapter wise (2to5) and learn by heart. (2x30=60)

2:-Learn by heart and write-

Topics-

A:-Development of mega sporophyte and microsporocyte

B:-Male and female reproductive system human and STDs

C:-Gametogenesis

D:-Pollination

E:-Contraception

3:- Make an investigatory project from any topic in your NCERT Biology book.

INSTRUCTIONS :-(a)-Write the project report on A4 size plain paper in your own handwriting.

(b)-Draw concerned colorful pictures.

(c)- The project should contain certificate, acknowledgement, index concerned information and bibliography.

PHE :

1. What do you mean by the Tournament? Explain the types of tournaments? ***(10marks)***

2. Briefly explain the Importance of tournament. ***(10marks)***

3. What are Intramural and extramural Activities? And its importance. ***(10marks)***

4. Briefly explain the yoga and yoga preventing hypertension and blood pressure. ***(10marks)***

5. Explain the balanced Diet. Explain Macro and micro nutrition. ***(10marks)***

6. Make a Project Report on your favorite game as per syllabus? ***(50 marks)***

Mention the points given below also:

- **History**
- **Measurement**
- **Diagram**
- **Arjuna Awardees Players Name with year**
- **National & International Tournaments**

IP :

Q1. Write the python code using Pandas library for followings:

a. **Find the min, max, sum and average of marks in the students marks dataframe. 10**
b. **Consider a Dataframe, where each row contains the item category, item name and expenditure. print the total expenditure. 10**
c. **Write SQL queries for all functions related to numbers, string, date & time. 20**
d. **Make the table STUDENT in MySQL with following fields; Rollno, Name, Address. 10**

Q2. Make a Pandas Project with following features (This project will be used as your board examination project work, So Make your project carefully): 50

a. **Make a spreadsheet in Microsoft Excel and save it as a csv file.**
b. **CSV file should be relevant to employee data.**
c. **Import csv file to Python platform by using Pandas and make it as a dataframe.**
d. **Apply all the aggregate functions on dataframe**
e. **Copy and paste all the code to the word file. Take a screenshot of the CSV file.**
f. **If you are not having a laptop/desktop at home. Do write all code and functions in the assignment notebook.**

**** Note: Nobody will take the printout of coding without teacher verification.**